

# More Multiplication Properties of Exponents Bell Work

Simplify the following expression

1.  $(g^3)^2$

2.  $(v^2)^{10}$

3.  $(2^2)^4$

4.  $(c^3d^2)^3$

5.  $(2x^5)^3$

6.  $(3a^3b^0)^3$

Evaluate the following using properties of power.

7.  $(2a)^2(3a^2)^2$

8.  $(3a^2b^{-1})^2(2a)^2$

9.  $(4d^2)^2(3cd)(5cd^5)$

10.  $(3x^3y^2)^2(4xy^{-3})^2(5xy)^0$

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Answer:

Simplify the following expression

1.  $(g^3)^2 = g^6$

3.  $(2^2)^4 = 2^8 = 256$

5.  $(2x^5)^3 = 2^3 x^{15} = 8x^{15}$

2.  $(v^2)^{10} = v^{20}$

4.  $(c^3 d^2)^3 = c^9 d^6$

6.  $(3a^3 b^0)^3 = 3^3 a^9 = 27a^9$

Evaluate the following using properties of power.

7.  $(2a)^2 (3a^2)^2 = 4a^2 (9a^4) = 36a^6$

8.  $(3a^2 b^{-1})^2 (2a)^2 = (9a^4 b^{-2})(4a^2) = \frac{36a^6}{b^2}$

9.  $(4d^2)^2 (3cd)(5cd^5) = 16d^4 (3cd)(5cd^5)$   
 $= 48cd^5 (5cd^5) = 240c^2 d^{10}$

10.  $(3x^3 y^2)^2 (4xy^{-3})^2 (5xy)^0 = 9x^6 y^4 (16x^2 y^{-6})(1)$   
 $= 144x^8 y^{-2} = \frac{144x^2}{y^{-2}}$